

NISTTech

Refreshable Braille Reader

Low cost, simple design for e-books and other print media

Description

The first of the major refreshable braille reading devices created by NIST, the Refreshable Braille Reader is comprised of a rotating drum-like cylinder with rows of openings for retractable pins.

See continuation-in-part patent below under citations.

Abstract

Refreshable Braille Reader: Patent 6,776,619

Apparatus and method for refreshable tactile display are disclosed, the apparatus being preferably embodied as a rotating-wheel refreshable Braille reader. The reader includes a housing having a reading aperture with a rotatable wheel assembly maintained therein so that a display surface of a rotating wheel passes the reading aperture. The wheel has endless rows of openings defined therethrough to the display surface, a pin held in each opening and freely movable therein. Actuators, at least equal in number to the rows of openings but substantially fewer in number than the openings, are held at a static location relative to the wheel for selectively moving pins in the rows so that Braille characters are arrayed at the display surface after passing the static location. Braille characters are thus streamed across the reading aperture of the housing.

Apparatus and Method Utilizing Bi-directional Relative Movement for Refreshable Tactile Display: Patent # 6,692,255

A refreshable Braille reader apparatus and method are disclosed, the apparatus preferably utilizing a rotating cylinder having endless rows of openings defined there through to a display surface with a pin held in each opening and freely movable therein. Static actuators at least equal in number to the rows of openings through the cylinder are maintained at a station adjacent to the surface of the cylinder, and are configured and positioned so that the pins are selectively contactable at either of their ends by different ones of the actuators during cylinder rotation in either forward or reverse direction thereby selectively placing first ends of the pins relative to the surface of the cylinder to allow streaming of Braille text across a display area in either forward or backward order depending upon selected direction of cylinder rotation.

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Citations

1. NIST Docket #99-021 CIP, U.S. Patent #6,692,255, Refreshable Braille Reader: Apparatus & Method Utilizing Bi-Directional Relative Movement (Continuation-in-part Patent)
2. NIST Docket #02-002, Patent #7,352,356, Refreshable Scanning Tactile Graphic Display for Localized Sensory Stimulation
3. NIST Docket #02-003, U.S. Patent #7,009,595, Extended Refreshable Tactile Graphic Array for Scanned Tactile Display

Related Items

- http://www.nist.gov/public_affairs/releases/n00-15.cfm

References

- U.S. Patent # 6,776,619 issued 08-17-2004, expires 08/06/2021
- Docket: 99-021US

Status of Availability

Available for licensing; patent active

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